LISTING OF CLAIMS:

This listing of claims replaces all prior versions, and listings, of claims in the referenced application.

1. (Currently Amended) A tri-stable MOS latch comprising:

a first series circuit coupling first and second supply voltage terminals, with the first series circuit including a first load element coupling the first supply voltage terminal to a first node, a first biasing element coupling the first node to a second node, and a first MOS transistor, including source, drain, and gate terminals coupling the second node to the second supply voltage terminal;

a second series circuit coupling the first and second supply voltage terminals, with the second series circuit including a second load element coupling the first supply voltage terminal to a third node, a second biasing element coupling the third node to a fourth node, and a second MOS transistor, including source, drain, and gate terminals coupling the fourth node to the second supply voltage terminal;

a feedback network coupling the first node to the gate terminal of the second MOS transistor and third node to the gate terminal of the first MOS transistor;

with said first and second load elements, biasing elements, and MOS transistors fabricated utilizing MOSFET technology and with the load and biasing elements creating substantially identical voltage drops to ~~identically, within part tolerances,~~ bias the first and second MOS transistors in triode mode to achieve a third stable operating point.

2. (Currently Amended) The apparatus of claim 1 wherein:

said first and second biasing elements are ~~is a~~ resistors.

3. (Currently Amended)The apparatus of claim 1 wherein:

said first and second biasing elements are ~~is a~~ diode-connected transistors.

4. (Currently Amended) A tri-stable CMOS latch comprising:

a first series circuit coupling first and second supply voltage terminals, with the first series circuit including a first PMOS transistor, including source, drain, and gate terminals coupling the first supply voltage terminal to a first node, a first biasing element coupling the first node to a second node, and a first NMOS transistor, including source, drain, and gate terminals coupling the second node to the second supply voltage terminal;

a second series circuit coupling the first and second supply voltage terminals, with the second series circuit including a second PMOS transistor, including source, drain, and gate terminals coupling the first supply voltage terminal to a third node, a second biasing element coupling the third node to a fourth node, and a second NMOS transistor, including source, drain, and gate terminals coupling the fourth node to the second supply voltage terminal;

a feedback network coupling the first node to the gate terminal of the second NMOS transistor, the second node to the gate terminal of the second PMOS transistor, the third node to the gate terminal of the first NMOS transistor, and the fourth node to the gate terminal of the first PMOS transistor;

with said first and second biasing elements, and MOS transistors fabricated utilizing MOSFET technology and with the biasing elements creating substantially identical voltage drops to ~~identically, within part tolerances,~~ bias the first and second PMOS and NMOS transistors in triode mode to achieve a third operating point.

5. (Currently Amended)The apparatus of claim 4 wherein:

said first and second biasing elements are ~~is a~~ resistors.

6. (Currently amended, Allowable))The apparatus of claim 1 wherein:

said first and second biasing elements are ~~is a~~ diode-connected transistors.

7. (Currently amended, Allowable) A~~n~~ MOS circuit comprising:

a current source;

a first clocking transistor having source, drain, and gate terminal with said ~~its~~ source terminal coupled to the current source, where the first clocking transistor conducts when a first control signal, received at said ~~its~~ gate terminal, is asserted;

a tristable MOS latch including:

first and second inputs for receiving ternary logic signals in either a first, second, or third state;

a first series circuit coupling a first supply voltage terminal to the drain terminal of said first clocking transistor, with the first series circuit including a first load element coupling the first supply voltage terminal to a first node, a first biasing element coupling the first node to a second node, and a first MOS transistor, including source, drain, and gate terminals coupling the second node to the drain terminal of said first clocking transistor;

A1 (cont'd)

a second series circuit coupling a first supply voltage terminal to the drain terminal of said first clocking transistor, with the second series circuit including a second load element coupling the first supply voltage terminal to a third node, a second biasing element coupling the third node to a fourth node, and a second MOS transistor, including source, drain, and gate terminals coupling the fourth node to the drain terminal of said first clocking transistor;

a feedback network coupling the first node to the gate terminal of the second MOS transistor and third node to the gate terminal of the first MOS transistor;

with said first and second load elements, biasing elements, and MOS transistors fabricated utilizing MOSFET technology and with the load and biasing elements creating substantially identical voltage drops to ~~identically, within part tolerances,~~ bias the MOS transistors in triode mode to achieve a third stable operating point;

a second clocking transistor having source, drain, and gate terminal with its source terminal coupled to the current source, where the second clocking transistor conducts when a second control signal, received at said ~~its~~ gate terminal, is asserted;

an input circuit including:

first and second ~~series~~ circuits respectively coupling the first and third nodes to the drain terminal of the second clocking transistor, with the first ~~series~~ circuit including a first input transistor having source, drain, and gate terminals, the first input transistor coupled to the first input to receive ~~for receiving~~ a first input signal at said ~~its~~ gate terminal and with the second ~~series~~ circuit including a second input transistor having source, drain, and gate terminals, the second input transistor

coupled to the second input to receive ~~for receiving~~ a second input signal at said ~~its~~ gate terminal;

where the tristable latch ~~will~~ holds any of the first, second, or third ~~three~~ states ~~previously~~ applied to the inputs when the first control signal is a asserted and the second control signal is not asserted.

A' (cont'd)

8. (Withdrawn)

9. (Currently Amended) A method for utilizing a MOS circuit in a ternary logic unit that receives one of three possible input signal levels, with the MOS circuit in the form of a MOS latch including an additional biasing element in the cross-coupling feedback structure, with the additional biasing element having a biasing characteristic that causes the MOS latch to have three stable operating points, said method comprising the acts of:

~~including the MOS circuit in a ternary logic unit that receives one of three possible input signal levels;~~

coupling the MOS circuit to receive the a ternary logic input signal in a first, second, or third state ~~three state input signals~~;

~~and to~~ latching the state of the ternary logic input signal received by the MOS circuit ~~accordingly~~; and

utilizing the state latched by the MOS circuit to perform ternary logic functions.